## AMENDMENTS to the CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in this application

Listing of the Claims:

1. (Currently Amended) Arrangement ~~preferably~~ comprised in a CAN system for making more efficient the utilization of available bandwidth on ~~the~~ a system's bus connection between, at least one of from ~~and/or~~ and to modules incorporated in the system and/or reduction of accuracy requirements of clock functions utilized in the system, the system working with a communication carried out on the bus connection, which communication operates in accordance with rules set up in the system and constitutes a combination of event- driven and time-controlled communication functions, characterized in that the said functions, together with a rule change in the time-controlled communication function, are arranged to achieve the said making at least one of more efficient ~~and/or~~ and the reduction, which rule change is arranged to give rise to deliberate collisions between messages appearing on the bus connection,

wherein with a virtual clock, each message is given a time slot in which the message is transmitted without colliding with another message, and

wherein each of the modules is set in relation to a time of transmission and reception of messages within a given tolerance in relation to the virtual clock and that part of the virtual schedule that relates to the respective modules.

2. (Currently Amended) Arrangement according to Claim 1, characterized

in that a virtual time schedule that is used is arranged to ensure that each message, ~~at least those that occur~~ in normal operating conditions, is allocated a time according to a virtual clock where the transmission of the message is to commence ~~in ideal conditions~~;

in that each module is able to be allocated an actual schedule, related to an actual clock in the module, for transmission of the message; and

in that the time of transmission is arranged to be earlier than the time allocated in the virtual schedule; and in that actual clocks in the modules are set in relation to the virtual clock.

3. (Currently amended) Arrangement according to claim 1, characterized in that ~~the~~ different nodes are arranged to base their time in relation to ~~the~~ a virtual clock on different references in the system.

4. (Currently amended) Arrangement according to Claim 1, characterized

in that ~~the~~ different nodes are arranged to be synchronized in different ways;

in that each node sets the time for transmission and reception of messages within a given tolerance in relation to ~~the~~ a virtual clock and the part of ~~the~~ a virtual schedule that concerns the respective node;

in that transmission attempts are arranged to be commenced when ~~the~~ a bus is free; in that slots arise in the communication; and

in that the transmission takes place in ~~the~~ a preceding time slot and a collision detecting mechanism comprised in the system enables the message to be sent as soon as possible~~, whereby the highest possible bandwidth utilization is made possible~~.

5 - 6 (Canceled).

7. (Currently amended) Arrangement according to Claim 1, characterized in that each message is provided with a unique identity, whereby a redundancy arises in the communication which is able to be utilized for ~~the~~ at least one of making more efficient ~~and/or~~ and the reduction.

8. (Currently amended) Arrangement according to Claim 1, characterized

in that messages are arranged to be able to be transmitted in time slots on both sides of ~~the~~ an allocated time slot, which is carried out by allowing a greater deviation from ~~the~~ a virtual clock than half a time slot; ~~and~~

in that messages are arranged to change places, which is made possible because they are provided with an identity and ~~the~~ a module concerned, ~~its~~

wherein a receiver, sorts out the correct message, which is made possible by ~~the~~ a number of possibilities being limited ~~in advance~~ and by availability of the requisite bandwidth being ensured in advance.

9. (Currently amended) Arrangement according to Claim 1, characterized

in that the length of ~~the~~ a respective time slot can be reduced also in the event of handling of stuffing bits; and

in that ~~the~~ a margin for the length of the time slots can be reduced by 12% in comparison to the requirements relating to the lengths of ~~the~~ time slots on the basis of a number of stuffing bits that varies from 0 to ~~of~~ 24% of a number of original bits.

10. (Currently amended) Arrangement according to Claim 1, characterized

in that by allowing ~~the~~ a real-time time schedule to vary, by utilizing collision detection without discard with immediate transmission after the termination of the collision and by using a unique identity for each message and,

in addition, by utilizing the CAN system characteristic that each identity is associated with a unique priority and by a discarded message, depending on its priority, being retransmitted immediately ~~depending on its priority, the~~ and making at least one of more efficient ~~or~~ and the reduction is achieved;

in that by allowing the automatic retransmission and co-ordinating ~~the~~ an allocated time slot with the message's priority, the communication's characteristics are tailored according to the requirements of ~~the~~ a total system; and

in that if the previous message has higher priority than ~~the~~ a next, ~~the~~ a previous message goes out on the bus immediately in the event of retransmission.

11. (Currently amended) Arrangement according to Claim 1, characterized

in that lost messages compete with subsequent messages in ~~the~~ a same way;

in that if all following messages have lower priority, the retransmission will result in the following messages being displaced one time slot;

in that if the following message has higher priority than ~~the~~ a discarded message, the discarded message will not go out onto the bus connection until there is a message with lower priority or the bus connection becomes free; and

in that in this way an ~~essentially~~ approximately 100% bus connection utilization is achieved ~~by means of a short and easily predicable waiting time for each message~~.

12. (Currently amended) Arrangement according to Claim 1, characterized

in that by arranging the system so that it allows messages to change position in ~~the~~ a virtual schedule within given limits, it is made possible that alarm messages are not sent according to schedule~~, in spite of the fact that the main part of the available bandwidth for the normal communication is utilized~~.

13. (Currently amended) Arrangement according to Claim 1, characterized in that with the use of protocols~~, for example CAN~~, where each message has a unique priority in the system and retransmission is carried out of messages that have been discarded.

14. (Canceled).

15. (Currently amended) Arrangement according to Claim 1, characterized in that the system comprises a hierarchy of virtual clocks; and

in that ~~even if~~ the system is complex or extensive and is ~~basically~~ time-controlled, one or more, even in an extreme case all, of the modules are arranged without a physical clock or clocks.

16. (Currently amended) Arrangement according to Claim 1, characterized in that ~~the~~ an actual schedule is constructed by ~~the~~ respective modules being programmed to send their messages in relation to ~~the~~ a virtual schedule.

17. (Canceled).

18. (Currently amended) Arrangement according to Claim 1, characterized

in that it is arranged to work with a slot allocation and/or slot length that varies depending upon ~~the~~ a module's event or function; and

in that, ~~for example,~~ for the transfer of critical values, ~~the~~ a transfer takes place more tightly or more often with more tightly spaced or more often appearing time slots than is the case when transfer is carried out of smaller or uncritical values; ~~and/or~~ and

in that the transfer interval is changed in the event of the occurrence of a change in ~~the~~ a value.

19 -20. (Canceled).